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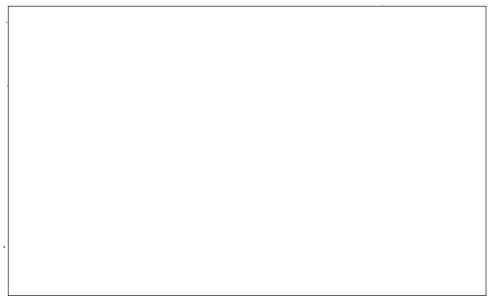

CONCEPTUAL PLAN

for

DEVELOPMENT AND EXPERIMENTATION LABORATORY FOR TECHNIQUES OF ANALYSIS

PROJECT DELTA

(FORMERLY JIRN)

Classified by DIA DP-3
SUBJECT TO GENERAL DECLASSIFICATION
SCHEDULE OF EXECUTIVE ORDER 11652
AUTOMATICALLY DOWNGRADED AT TWO
YEAR INTERVALS
DECLASSIFIED ON DECEMBER 31, 1978

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CONTENTS

Chapter I

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General Concept and Objectives

A. Purpose: The purpose of this plan is to provide a systems concept, definition of objectives, organizational structure, and statement of resource requirements for a DIA RDT&E program for improved methodologies and techniques in the processing analysis, and production of intelligence. The initial effort will be directed at improving capabilities in the field of operational intelligence and warning. It will be known as the Development and Experimentation Laboratory for Techniques of Analysis, Project DELTA (formerly JIRN). 25X1

B. Requirement:

1. No R&D program exists today in the US Intelligence Community which is specifically focused on improving analytic and production capabilities in the field of operational intelligence and warning. Research and development expenditures in intelligence now total nearly [redacted] annually. Virtually all of it is devoted to the development of new hardware (e.g., [redacted] or to improvement of capabilities for initial readout of the results obtained from specific collection systems. The very modest R&D efforts which have been devoted to date to the support of intelligence production have been concentrated almost entirely on the worldwide DoD Intelligence Data Handling System (IDHS). At present, IDHS provides support to many functional areas of intelligence, but extremely limited support to operational intelligence and warning. [redacted] 25X1 still perform their tasks without appreciable improvement in the methods, techniques and processing support they have always used.

2. A vigorous and continuing RDT&E program is essential to the success of current efforts to modernize the [redacted] Without it, modernization efforts will result in little more than the installation of selected items of hardware. Without it, the potential value of existing and planned collection systems cannot be realized. 25X1

3. The development of improved analytical methodology and techniques for current intelligence and warning is analogous to those research efforts in the medical community which are directed at continually improving diagnostic routines and treatment protocols. In the absence of this type of research, the medical community would achieve only limited payoffs from the development of new sensors directed at various parts of the human body.

4. The need for improved analytic techniques, methodology and capabilities in intelligence production has been stressed at the highest levels of our government. In September 1969, the President's Foreign Intelligence Advisory Board (PFIAB) recommended the initiation and vigorous prosecution of an experimental program to provide automated support to the timely processing, evaluation and reporting of current intelligence indications. It also recommended the establishment of "research facilities" for this purpose in the various intelligence agencies. The President, in his memorandum of 5 November 1971 (Organization and Management of the US Foreign Intelligence Community) stressed the need for improving the intelligence product and stated that a "determined effort" should be made to upgrade analysis methods. On 15 May 1972, a member of the staff of the National Security Council addressed a memorandum to the Assistant Secretary of Defense (Intelligence) stating that "the intelligence community does not finance much in the way of R&D on intelligence analysis." He recommended a research effort to include such areas as: methods of communicating uncertainty between intelligence analysts and consumers, Bayesian analysis and conditional probability, decision techniques, statistical inference, hypothesis testing, and computer-assisted analysis. On 2 August 1972, ASD(I) forwarded the above memorandum from the NSC staff to the Director, ARPA stating: "I share Mr. Marshall's interest in research to improve intelligence analysis and I believe that research in the areas suggested by Mr. Marshall and by members of my staff would be productive."

5. Project DELTA initially will address that part of the requirement for improved intelligence analytical methodology which pertains to operational intelligence and warning. It is anticipated that the techniques and methodology developed will result in significant benefits for the entire field of intelligence production.

C. Objectives:

1. DELTA will provide an RDT&E facility for the conduct of experiments in support of intelligence analytical techniques. The results of each experimental operation will be evaluated against the standard of current operational methods and results. Those experiments clearly indicating improvements in cost-effectiveness may be transitioned from research to operations, subject to availability of operations and maintenance funding. In general then, the objective of DELTA is to identify and define those areas of intelligence analysis and production in which a demonstrable improvement is feasible through the application of information science and technology.

2. DELTA will be a research project oriented toward substantive intelligence analysis and support. As such, it is not designed to test hardware. Therefore, although DELTA resources will include data handling and computer support capabilities, advanced "off the shelf" support will be used to minimize technical problems within the facility. While the capabilities and advances achieved in other developmental systems (Community On-Line Intelligence System (COINS), Defense Intelligence Agency On-Line System (DIAOLS), Program Assisted Console Evaluation

and Review System (PACER), Visual Analysis Sub-System (VASS), and similar systems) will be used wherever applicable, no part of DELTA will be devoted to purely technological improvement of data systems. DELTA will remain exclusively a research effort in substantive intelligence analysis and production. Experimental results will be measured entirely in relation to their utility and impact upon substantive intelligence.

3. In pursuit of these objectives, DELTA will:

a. Develop and operate an RDT&E facility for the analysis and production of intelligence.

b. Procure, as required, dedicated "state-of-the-art" hardware, software, and communications support for the experimental facility to provide optimal technological support with minimal technical problems.

c. Provide for communications interfaces with selected other major producers of operational intelligence, such as the Unified and Specified Commands and the Military Departments, and with selected major sources of information input such as NSA, NPIC, the Attache System, etc.

d. Conduct research on precisely defined experiments relating to operational intelligence.

e. Effect detailed analysis and evaluation of the utility and cost-effectiveness of experimental results, in relation to the same problems addressed by currently operational methodologies.

f. Develop, on the basis of affirmative experimental results, capabilities and applications for operational use.

g. Transfer approved developed analytical techniques, methodologies and procedures to operational users. Prepare definitive reports on negative findings, indicating remaining problem areas; and initiate follow-on experiments.

Chapter II

Characteristics and Applications

A. Characteristics:

1. The project will optimize substantive intelligence utility rather than technological advance.

2. Project resources, including all intelligence systems and technical personnel, and data handling facilities will be funded within, and remain dedicated to, this RDT&E effort.

3. Project direction will be under a research and development project manager, as defined in DoD Directive 5010.14.

4. DELTA will conduct controlled research and development experiments, using actual intelligence information in an operational environment, but without a commitment to provide operational support (except in emergencies).

5. The DELTA facilities will be secured for all-source operations at all times.

B. Equipment:

1. DELTA will operate with a secure, reliable state-of-the-art technical capability for data processing support. The research and development nature of the project dictates a broad capability to include remote batch and interactive timesharing operations.

2. No specific equipment will be identified for procurement until present resources available for dedication to this project are exceeded. Current criteria require interface with the NSA interagency data exchange system, the current intelligence support facilities of the U&S Commands and Military Departments, the World Wide Military Command and Control System (WWMCCS), and the tactical and intelligence sensor systems in order to fulfill the Indications and Warning requirements. Toward this end, DELTA will be developed and will operate in close coordination with the system design and engineering for the worldwide indications and warning system, assigned to the Rome Air Development Center, Air Force Systems Command. Subject to these considerations, the programming languages, data management systems, executive operating systems and query languages will be interoperable.

3. Software will include standard library programs, applying the techniques of quantitative and statistical analysis.

C. Areas of Experimentation:

1. Design constraints

a. A constant goal of operational intelligence is to instill higher confidence levels in analytical judgments. In examining experimental techniques that can contribute toward this goal, certain characteristics of the information used in operational intelligence must be borne in mind.

b. To the operational intelligence analyst, events and evidence are almost invariably presented in narrative form. Even if acquired in other forms (PHOTINT, ELINT, COMINT . . .) the information generally is processed from signals into human readable narrative before transmission to the analyst. Given this fundamental constraint, DELTA will concentrate on improved information processing techniques, display devices and quantitative and qualitative aids to decision making which can operate on narrative data, quantified, or at least scaled, whenever possible.

c. A number of studies of the activity in operational intelligence have been made. A study of this area in DI is now in progress. Utilizing these and similar studies and the guidance of DI, the most pressing needs will be addressed first. While these needs should not be predetermined at this stage of planning, speculation on examples of these needs provides a useful aid to further planning and implementation.

2. Phase I: Early Applications

a. Information Storage and Retrieval

(1) Development of message storage and retrieval system. Message traffic, being high in volume and most "perishable," is an early application candidate. A subsystem to provide on-line access to a 30, 60, or 90 day store of traffic would be very useful. A system of indexing, plain text and keyword processing, or some other method of content control, would provide a highly selective retrieval and correlation capability. The analyst could continually monitor and correlate traffic using an on-line data handling system. At present, he depends upon experience, memory, and laborious manual methods to perform this important task.

(2) File Manipulation. Another required operation is the continuing comparison of incoming information against existing information such as a data base of "routine" intelligence produced by DIA and other agencies. The current intelligence analysts' access to this data can be improved both in timeliness and extent. Direct access to finished intelligence on personalities, military capabilities, installations, and weapon systems, (the "people, places and things" which interact to cause events), would be a significant improvement over present access methods. Communications among the Commands and agencies can now enable direct access to such information wherever it resides, whether in the local Washington area or at PACOM, for example. Access to this information can be provided directly to the analyst by his use of terminals and a data management system (language) which can be virtually "transparent" to him, requiring very little special training and consuming very little of his time.

b. Information Displays

(1) Unfortunately, even with highly selective data access systems, the selected information presented for analysis increasingly reaches an unmanageable volume. A narrative or tabular listing of a thousand selected facts is not readily assimilable by the human intellect. However, each of these facts represents a data point that can be synthesized into displays from which almost immediate hypotheses can be drawn for testing by an experienced analyst. For example, a tabular listing of all foreign air activity on a given day would be an all but unintelligible mass. Displayed in an origin/destination statistical table, however, it provides useable information for analysis. Perhaps even more immediately useful would be a map display with the flight traffic displayed by lines weighted for volume. It should be noted parenthetically that analysts do prepare such displays manually, at great cost in time, in order to be able to understand and exploit a mass of data.

(2) Data mapping techniques currently in use in many activities can be modified to fit DIA analytical problems, thus permitting huge volumes of information to be displayed by density, distribution and quality. Such displays can be interactive with the analyst, enabling him to refine, modify and otherwise experiment with "what if" propositions and observe the potential impact of such propositions on the entire data base.

c. All-Source Collation, Correlation and Multi-File Query

(1) Various search techniques, by location, time, type, numbers, names, and many other conditions can provide a rapid search of disparate sources and a collation, i.e. assembly, of all pertinent data in appropriate order for analysis. For example, travel of key personalities in a given area between given dates can be compared with air traffic, communications traffic, etc. In short, a single set of selection parameters can be used to query a number of files, providing an array of information for analysis. To achieve this manually, or even with some existing automated systems, is cumbersome and sometimes impossible.

(2) Physical correlation (as distinguished from statistical correlation discussed below) will also be examined. It may be possible to develop a capability to retrieve and display, on a geographic or data coordinate basis, overlays or patterns of activity showing both volumes and rates of change on such subjects as air movements, submarine activity, logistic stockpiling, communications traffic, test range activity, shipping, VIP travel, infiltration, etc. Successive overlay of such displays can indicate trends, patterns, confluences and critical points for further immediate analysis.

(3) In addition to using a data base produced by others, the current intelligence analyst can create and manipulate files of his own.

He can continually revise these files on the basis of his analysis of incoming traffic. Eventually, these files can be "combined" with those of other operational intelligence centers by on-line access and query. Later DELTA will develop capabilities for computing and revising probabilities on the basis of new information received.

d. Probability Analysis

Using the events file developed earlier, probabilities can be estimated for each of a set of occurrences. As new events are reported these event probabilities can be combined or "chained" into an overall estimate of probability. Current DI work along these lines will be enlarged and its applicability to operational intelligence will be investigated and evaluated.

For example, assume that component test data on a given weapon system yields the following:

Component C_1 succeeds 98% of the time
Component C_2 succeeds 80% of the time
Component C_3 succeeds 87% of the time

Elementary probability analysis states that when the weapon these components comprise is employed, it will succeed

$$.98 \times .80 \times .87 = .68208$$

or 68% of the time. It can now be hypothesized that the user of this system will require two weapons for each single target assigned to the weapon system, if assured performance is necessary.

This case is merely illustrative of simple probability analysis. Conditional probability and Bayesian analysis can be applied to far more complex situations yielding far less obvious answers.

e. In summary, early DELTA effort will address the development of data bases and manipulation and display capabilities designed expressly for operational intelligence in its present form. Assuming some successes in this area, DELTA, in the mid-range time period, will use this data base and experience for experimentation on more advanced techniques.

3. Phase 2: Mid-Range Applications

a. Correlation

Correlation is an analytical technique which examines a set of data in terms of (as a function of) another set. Once an acceptable relationship is established, it is possible to determine precisely the degree of relationship between the two sets. This relationship, expressed as a "coefficient of correlation," provides a measure of the amount of change in one set directly attributable to the other. In a more advanced

form these relationships can be determined among multiple sets (sources) and the change and interaction among them can be far more accurately extrapolated. With some subjects the degree of correlation is obvious and simple to establish. Sales of guns to sales of ammunition, or of aircraft to fuel are examples. In operational intelligence, of course, the relationships are generally so hidden and complex that time does not permit their full exploitation. For example, what is the degree of relationship of test activity to training, or of air activity to foreign aid programs, or of truck movement in the Laotian Panhandle to the moon phases? A system can be designed to provide very rapid analytical support capabilities of this sort. Such a capability is of great value in extrapolation and forecasting.

b. Regression Analysis

Regression analysis is a technique for determining an expression, or set of relationships, which describes the observed behavior between two sets of information. If the amplitude and direction of change in one set is known, then the future behavior of the other set can be predicted scientifically.

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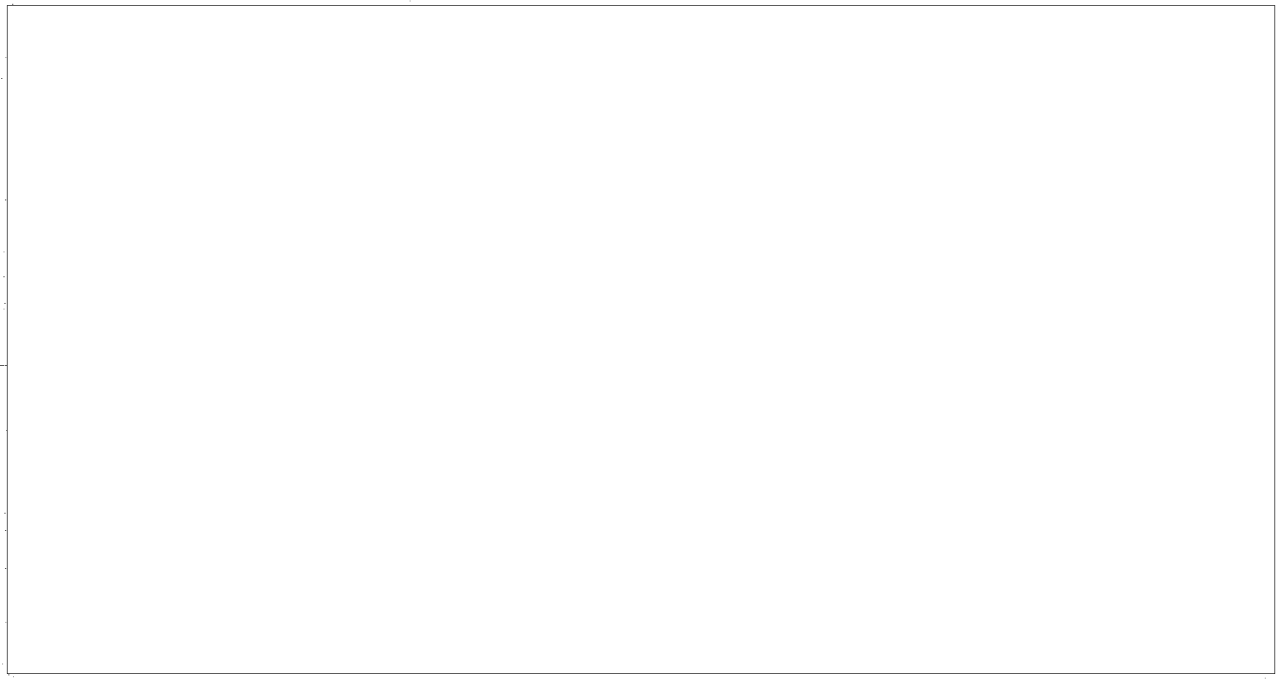


This contrived example is intended only to illustrate the technique. Obviously, an experienced analyst would perform an "intuitive" regression analysis without this technique and he would report "some degree of probable or possible" relationship between the two events. This experiment will apply scientific method to that intuitive procedure, perhaps yielding greater and more accurate value from the same inputs.

c. Statistical Analysis

Statistical analysis of data can provide measures for determination of norms and departure from norms. If an average of certain daily activity is known from past history and the distribution of variations about that average can be determined, then a set of variances can be defined. With this data, control charts depicting the norm and its variance can be displayed, with actual events being plotted on the chart as they occur. The exceeding of norms by events is then immediately obvious.

From the correlation example above, 10 was found to be normal level of strategic air activity. By statistical analysis it might be found that the distribution about that mean is statistically normal with a standard deviation of 2. It would be possible then to have the automated message handling system, described above, count the unique flight identifiers for strategic flights during a given base period. When that count for the period exceeds 12, the analyst can be advised to check for additional tender deployments. The potential extensions of these techniques into a very advanced network of indicators will be attempted.

d. On-line conferencing techniques

With on-line computer support it is possible to develop a modern "conferencing" technique, using many expert judgments to arrive at consensus estimates as a basis for decision. It is possible for analysts, worldwide, who are expert on a given subject, to combine their judgments through an on-line data system, so that in a matter of minutes, the National Command Authority can be briefed, that "the consensus judgment of all experts, worldwide, is that this event means . . . ." This technique holds great promise in forecasting, and is used most prominently by the Executive Office of the President in forecasting impact of events on the national economy. This capability is revolutionary in relation to those now existing in operational intelligence. It is not simply an exchange of views, but a precise reduction of judgments to a range acceptable for a basis of action.

4. Phase 3: Long Range Applications

a. Modeling

In the long range, DELTA may examine some of the more esoteric analytical techniques, such as modeling. Here, the main problem is the construction of the model itself, which must be done with the most expert judgments available. For example, if one can postulate a linear model of what the Soviets consider the optimal force to be maintained in East Germany, and if one can estimate the principal objectives of that force, then actual events and changes can be evaluated against that model and the capability of a given force to meet the objectives can be measured. This "sensitivity analysis" serves as a basis to revise norms and indicator lists and estimates of future intent. It should be noted that far more advanced models, involving multiple non-linear relationships, can be developed.

b. Simulation and Gaming

(1) Scenarios representative of certain major chains of events can be developed, exercised and modified to observe the changes resulting from hypothetical or actual events.

(2) Gaming techniques can provide a basis for estimating potentially hostile strategies as represented by, or extrapolated from, events. These, like most of the other advanced techniques, involve some risk because of the uncertainties involved. An adversary may have a very complex combination of strategies and motives, which might change radically with a simple change of command or of political leadership. These techniques can be of great value in developing alternatives for analytical consideration, replacing the futility inherent in assessing uncertain actions of a hostile opponent.

5. Phase 4: The Distant Future

In the future, operational intelligence centers may receive information directly from many deployed technical sensors. The information will be converted, correlated and arrayed in display matrices, with indicators, norms and probabilities being continually updated and displayed. When specified combinations of events occur, or when a given probability threshold is exceeded, the analyst will be warned and all data will be displayed for his examination and study.

Chapter III

Tasking

A. This conceptual plan is intended to provide a framework for the organization and tasking of those resources required to address DELTA implementation planning in detail.

B. Intelligence Directorate (DI)

1. DELTA is initially dedicated to addressing a major function of DI. The major substantive input to the project will be in accordance with requirements defined by DI. The early experiments and applications will be developed under the substantive guidance of DI. Therefore, the Project Director will be organizationally attached to DI, reporting through DI to the Director.

2. The DELTA Project Director will: assume responsibility for project implementation upon approval of this concept plan. Implementation planning requires that DI:

a. Assemble, review and consolidate applicable previous studies and analyses of operational intelligence.

b. Perform additional analyses as required to supplement the consolidated study into a complete and detailed analysis of operational intelligence in DIA.

c. Examine operational intelligence activities in the major Agencies, Military Departments, and Commands, to identify similarities and define variations.

d. Identify in priority order the first DELTA data base application from the resultant description of operational intelligence.

e. Assist in design of those applications and in the preparation of evaluation parameters for those applications.

f. Integrate the implementation plan inputs of all Directorates.

g. Provide continuing direction for the operation, evaluation and application of DELTA to the processing, analysis and production of intelligence.

C. Support Directorate (DS)

1. DELTA hardware and software planning will proceed with the design constraint that ultimately the DELTA data handling facilities must interface three major "communities": First, other DIA systems; second, the worldwide indications and warning network; and third, the Washington area intelligence community. This planning, as well as participation in hardware and software evaluation and selection, is a primary responsibility of DS.

2. In addition, DS will be tasked to address the problems of security, space allocation, communications, and personnel.

3. The DS DELTA project officer in conjunction with DI will:

a. Identify and define existing ADP resources which can be dedicated to DELTA support.

b. Initiate hardware/software evaluation preparatory to selection, if and when existing dedicated resources are exceeded.

c. Plan hardware/software selection and procurement, as required. Participate in initial application design.

d. Plan for required hardware/software interfaces.

e. Provide continuing technical guidance for the continuation of DELTA.

f. Plan for implementation of space, security, communications personnel and other support requirements.

g. Insure responsive support of additional DELTA requirements.

D. Plans Directorate (DP) will:

1. Prepare, and staff for approval, the concept plan for Project DELTA.

2. Program research and development funds for support of Project DELTA.

3. Coordinate implementation actions prepared by the Project Director in DI.

4. Initiate plans required for the external interface of the DELTA concept with Commands, Military Departments, other agencies, and the Washington area intelligence community.

5. Monitor and evaluate project implementation and operation for consistency with the DELTA concept plan and overall intelligence system plans.

E. Collection Directorate (DC) will:

1. Provide guidance relative to standard collection reporting formats and procedures.

2. Provide guidance on interface with selected major sources of collection reporting, such as NSA, NPIC and the Defense Attache System.

3. Advise on parallel developments in the collection system, such as indexing and sensor source data automation.

F. Other Directorates

CC, DE, DC, AA, and DT DELTA project officers will participate in implementation planning in order to keep informed of potential impact upon their activities, as well as to assist in addressing pertinent problems as they arise.

G. Procedure

Each Directorate (DI, DP, DS, CC, DE, DC, AA, and DT) will appoint a project officer for all matters pertaining to DELTA planning. Upon final coordination and approval of this conceptual plan, implementation planning should be accomplished by assigning major portions exclusively to a single Directorate, rather than planning by committee. Action officer's will address jointly only total contributions, their integration, and other joint problems encountered. Upon appointment by DI of a Project Director, the Project Director will assume the central direction, planning, integration and coordination required for DELTA implementation, operation, and evaluation.

Chapter IV

Administrative Considerations

A. Organization: The four military and 37 civilian personnel of DELTA will be organized and distributed as shown in enclosure 3.

B. Project Subordination:

1. As the initial objectives of DELTA are directed toward the development of substantive capabilities in operational intelligence, the project will be under the executive direction of the Deputy Director for Intelligence (DI). As an experimental facility DELTA will address not only existing DI procedures and requirements in production of operational intelligence, but also will examine completely new methodologies, procedures, techniques, and capabilities. Guidance and coordination on these matters as well as planning for external interfaces and evaluation of results will require participation, monitoring, review and evaluation by the Plans Directorate (DP). Coordination of the required hardware/software interfaces with other external and internal systems will require the coordination and technical guidance of the Support Directorate (DS).

2. These internal relationships of the project to other DIA elements are depicted in enclosure 4. The Project Director will report through the Deputy Director for Intelligence to the Director. The Project Director will receive primary substantive intelligence support requirements from DI, designing and conducting experiments on those requirements and reporting results to DI. He will receive primary technical guidance from DS. Systems and technical personnel will be assigned organizationally to DS and they will be operationally responsive to DELTA.

3. Overall policy, planning and programming guidance for DELTA will be provided by the Directorate for Plans (DP).

C. Resource Allocation:

Funding and manpower resources for DELTA are shown in enclosure 2.

D. Space Requirements:

The optimum location of the DELTA facility and associated equipment will be determined by DI. DI will provide for adequate work areas to meet operational and environmental requirements.

E. Implementation Planning Schedule: Following approval of the DELTA Conceptual Plan, implementation planning and actions will be phased to insure that staffing, resource acquisition and initial applications are under way by mid-73. The following schedule will meet that objective:

Tasking for implementation planning	5-15 Nov 72
Directorates' progress report on implementation planning	15 Dec 72
Directorates' final inputs and integration	15 Jan 73
Coordination and approval of implementation plan	1 Feb 73
Initiate implementation as planned	1 Feb 73
DELTA initial research capability	1 Jul 73

F. Anticipated Gains:

1. In the final analysis, the efforts of the intelligence community, and the sizeable magnitude of its budget, must be judged by the quality and timeliness of its product. This is precisely where the anticipated improvement resulting from Project DELTA is focused.

2. Heretofore, the intelligence community has expended virtually all of its vast R&D resources on the development of a wide spectrum of collection systems and on related processing centers which provide initial "readout" capabilities. Very little R&D effort has been applied to product improvement, and virtually none in the field of operational intelligence and warning. This has resulted in a situation where the President and other high-level decision-makers are now calling for a determined effort to improve our analytic techniques and methodology in order to improve the intelligence product.

3. The changing nature of the threat facing the United States has reduced our confidence that we will be able to provide strategic warning. There is, therefore, a compelling requirement to assure that we are able to exploit all appropriate data from each collection system in minimum time and correlate the results obtained from one system with those obtained from another. The development of such a capability requires an R&D effort in analytic techniques and methodology such as DELTA will provide.

4. In brief, the anticipated payoff from DELTA will come from product improvement and greater return on the considerable investment of the U.S. Intelligence Community in its collection systems.

4 Enclosures a/s

FOR THE DIRECTOR:

OFFICIAL:

Enclosure 1

Operational Intelligence

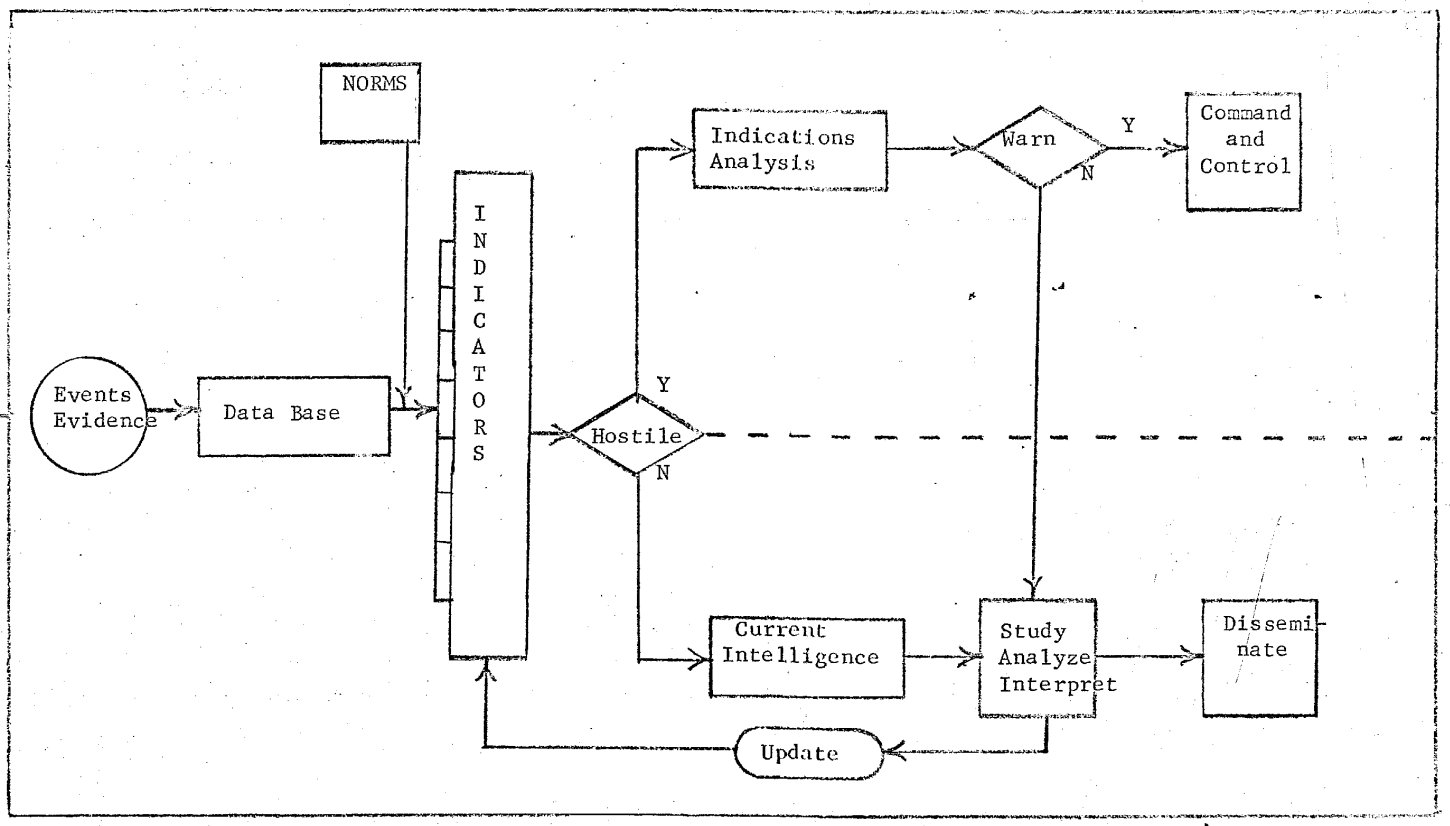
DEFINITIONS

Indications and Warning - The short-range process of monitoring, analyzing and assessing events and evidence against an array of indicators and providing warning of imminent events or situations, as required.

Current Intelligence - In depth, all source, deliberative analysis of events and evidence against the same indicators, plus other organizational reporting requirements.

Operational Intelligence - Indications and warning, plus current intelligence.

Information Flow in Operational Intelligence - as depicted in Figure A1.



OPERATIONAL INTELLIGENCE

Enclosure 2

Resource Planning

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Enclosure 3

Organization and Personnel

Project Management Office

Chief	GS15
Deputy	06
Secretary	GS 7

Operational Intelligence Unit

Chief	06
Secretary	GS 6

Systems Support Unit

Chief	GS15
Secretary	GS 5

Indications & Warning

Chief	GS14 (1)
Intel Spec	GS13 (2)
Intel Spec	GS12 (4)
Intel Spec	GS11 (2)
Intel Spec	GS09 (1)

Intelligence Support

Chief	GS14 (1)
Intel Spec	GS13 (2)
Intel Spec	GS12 (4)
Intel Spec	GS11 (2)
Intel Spec	GS09 (1)

Systems Analysis

Chief	GS14 (1)
Sys Anal	GS13 (2)
Sys Anal	GS12 (2)
Sys Anal	GS11 (1)
Sys Anal	GS 9 (1)

Computer Support

Chief	GS14 (1)
Sys Anal	GS13 (2)
Sys Anal	GS12 (1)
Sys Anal	GS11 (1)
Com Spec	03 (2)

DELTA Organization

MILITARY

Position	No	Grade	Service
Assistant Proj Manager	1	06	USAF
Chief, Intelligence Unit	1	06	USAF
Communications Officer	2	03	USA

TOTAL MILITARY - 4

CIVILIAN

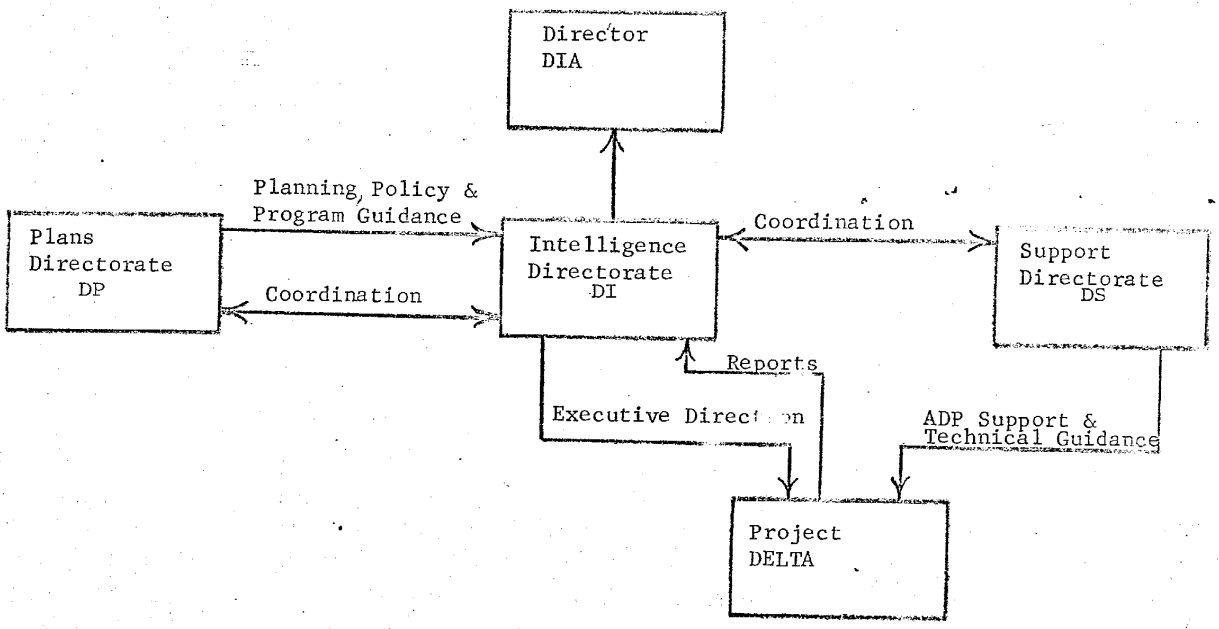
Position	Grades								
	5	6	7	9	11	12	13	14	15
Project Manager									1
Chief, Systems Support									1
System Analyst				1	2	3	4	2	
Intelligence Analyst				2	4	8	4	2	
Secretary	1	1	1						
GRADE TOTALS -	1	1	1	3	6	11	8	4	2

TOTAL CIVILIANS - 37

DELTA Rank/Grade Distribution

Enclosure 4

Organizational Relationship



ORGANIZATIONAL RELATIONSHIPS